

Name: \_\_\_\_\_

**at1124exam: Radicals and Squares (v803)**

**Question 1**

Simplify the radical expressions.

$$\sqrt{27}$$

$$\sqrt{8}$$

$$\sqrt{18}$$

**Question 2**

Find all solutions to the equation below:

$$\frac{(x+8)^2}{4} - 3 = 6$$

**Question 3**

By completing the square, find both solutions to the given equation. *You must show work for full credit!*

$$x^2 - 14x = 72$$

**Question 4**

A quadratic polynomial function is shown below in standard form.

$$y = 2x^2 + 28x + 90$$

Express the function in **vertex form** and identify the **location** of the vertex.